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EXAMINER

KOSLOW, CAROL M

ART UNIT

PAPER NUMBER

1755

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,308

Applicant(s)

DEVENNEY ET AL.

Examiner

C. Melissa Koslow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 is/are allowed.
- 6) ☒ Claim(s) 1-16, 18 and 20-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

This action is in response to applicants' amendment of 29 May 2003. The amendment to the specification overcomes the objection to the disclosure and meets the requirements in order to receive benefit under 35 USC 120. The 35 USC 112, second paragraph rejection over claims 19 and 20 are withdrawn due to the amendment to the claims. The rejection over claims 1 and 20 over Pedrero et al is withdrawn due to the amendment to the claims. Upon further considered by the Examiner, the 35 USC 112, first paragraph rejections over claims 17, 18 and 20 are withdrawn, since these claims are not drawn to a process. Since the claims in the references are not identical those in the present application, the 35 USC 102(f) rejections and the provisional rejections over Application 09/995,561 are withdrawn. The obviousness-type double patenting rejection over 09/745,796 is withdrawn since this application has been abandoned. Applicant's arguments with respect to the remaining rejections have been fully considered but they are not persuasive.

The effective filing date for claims 17-19 and the embodiment of claims 1-16 and 20 where process where the europium source is EuOX ' is 8 October 1999 since this subject matter is taught in Provisional application 60/159,004, but not in Provisional application 60/142,276.

Provisional applications 60/159,004 and 60/142,276 do not teach processes the subject matter of claim 21. These teachings are found in PCT/US00/16904. Thus the effective filing date for claims 21-24 is 16 June 2000.

The effective filing date for embodiment of claims 1-16 and 20 where process where the europium source is EuX_2 ' or EuX_3 is 2 July 1999 since this subject matter is taught in Provisional application 60/142,276.

Claims 4-6, 10-12 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 is improperly dependent on claim 15, since claim 14 is directed to a process and there is no teachings of a and b in claim 15. Claim 18 should depend from claim 17. Claims 4-6 and 10-12 are improperly dependent on claim 1 since claim 1 defines X as Br or a combination of Br and Cl, while claims 4-6 teach X is Br or Cl.

The amendment to claim 18 does not overcome the rejection. Accordingly, it is maintained.

Claims 1, 4-7, 10-13 and 20-24 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for CsX phosphors containing 10^{-3} to 5 mol% of europium where X is Cl and/or Br, the methods for forming these phosphor and binderless phosphor screen comprising this phosphor, does not reasonably provide enablement for CsX:Eu phosphors where X is Cl and/or Br and the amount of europium is undefined, the methods for forming these phosphor and binderless phosphor screen comprising this phosphor. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The claims recite CsX:Eu phosphors where X is Cl and/or Br and the amount of europium is undefined, the methods for forming these phosphor and binderless phosphor screen comprising this phosphor. However, the specification only teaches CsX phosphors containing 10^{-3} to 5 mol% of europium where X is Cl and/or Br, the methods for forming these phosphor and binderless phosphor screen comprising this phosphor. Such a limited disclosure does not

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support the breadth of the instant claims. The examiner suggests the incorporation of the amount of europium in the claims.

Applicants' arguments have been considered but are not convincing since the rejection is that the claims are broader in scope than the specification, not that the disclosure is non-enabling as argued. Thus there is no requirement to show undue experimentation. See MPEP 2164.08. The rejection is maintained.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 21 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Pedrero et al.

This article teaches producing CsCl:Eu crystals or phosphors by mixing CsCl and EuCl₂, melting the mixture the mixture and then cooling the melt. CsCl melts at 645°C and EuCl₂ melts at 731°C, thus the melting temperature of the process is above 450°C. The process of this application clearly reads upon that taught. Thus the taught crystals must be the same as those in claim 21. When the prior art and appellant both describe processes which are indistinguishable, then the products may also be assumed to be inherently indistinguishable. *In re Myers* 159 USPQ 339 (CCPA 1968); *In re Prindle* 132 USPQ 282 (CCPA 1962).

Applicants' argue the article does not disclose the taught phosphor has the claimed property and that the taught phosphor does not inherently have the claimed property. With respect to the silence, this does not overcome the rejection since the fact the article did not measure the emission at 254 nm does not mean the taught phosphor does not inherently have the claimed property. Applicants argue that only phosphor doped with trivalent europium will have the claimed property, but there is no teaching in the specification to support this argument and

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applicants have not submitted any evidence to support this argument. The rejection is maintained.

Claims 1-13, 15 and 20-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Application Publication 2001/0007352.

This published application claims a binderless phosphor screen comprising a CsX:Eu phosphor, where X is Cl or Br produced by mixing CsX with 10^{-3} to 5 mol% of an europium compound selected from EuX'_2 , EuX'_3 and EuOX' , where X' is F, Cl, Br or I; firing this mixture at a temperature above 450°C ; cooling and recovering the phosphor. The patent teaches the binderless phosphor screen can be produced by applying the phosphor produced by the above process to a substrate by a method selected from chemical vapor deposition or physical vapor deposition. The screen can also be produced by bringing heatable multiple containers of CsX and an europium compound selected from EuX'_2 , EuX'_3 and EuOX' , where X' is F, Cl, Br or I or a single container comprising a mixture of CsX and an europium compound selected from EuX'_2 , EuX'_3 and EuOX' , where X' is F, Cl, Br or I into a deposition chamber with a substrate and depositing the mixtures to a substrate by a method selected from chemical vapor deposition or physical vapor deposition. The claimed processes are identical to those claimed and the taught phosphor composition falls within the claimed formula. The taught phosphor would inherently have the claimed property of claim 21. When the prior art and appellant both describe processes which are indistinguishable, then the products may also be assumed to be inherently indistinguishable. *In re Myers* 159 USPQ 339 (CCPA 1968); *In re Prindle* 132 USPQ 282 (CCPA 1962).

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Claims ~~1-15~~ and ~~20-35~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,479,835; US Patent 6,512,240; US Patent 6,528,812 or US Patent 6,501,088.

All of these patents claim devices or processes which comprise a binderless phosphor screen comprising a CsX:Eu phosphor, where X is Cl or Br produced by mixing CsX with 10^{-3} to 5 mol% of an europium compound selected from EuX'_2 , EuX'_3 and EuOX' , where X' is F, Cl, Br or I; firing this mixture at a temperature above 450°C ; cooling and recovering the phosphor. The patents claim the binderless phosphor screen can be produced by applying the phosphor produced by the above process to a substrate by a method selected from chemical vapor deposition or physical vapor deposition. The claimed processes are identical to those claimed and the taught phosphor composition falls within the claimed formula. The taught phosphor would inherently have the claimed property of claim 21. When the prior art and appellant both describe processes which are indistinguishable, then the products may also be assumed to be inherently indistinguishable. *In re Myers* 159 USPQ 339 (CCPA 1968); *In re Prindle* 132 USPQ 282 (CCPA 1962).

²¹⁻²⁴
Claims ~~1-16~~ and ~~20-35~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,495,850.

This patent claims a processes of stimulating a binderless phosphor screen comprising a CsX:Eu phosphor, where X is Cl or Br produced by mixing CsX with 10^{-3} to 5 mol% of an europium compound selected from EuX'_2 , EuX'_3 and EuOX' , where X' is F, Cl, Br or I; firing this mixture at a temperature above 450°C ; cooling and recovering the phosphor, where the phosphor has a radiation stored therein. The patent claims the binderless phosphor screen can be produced by applying the phosphor produced by the above process to a substrate by a method

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selected from chemical vapor deposition or physical vapor deposition. The claimed processes are identical to those claimed and the taught phosphor composition falls within the claimed formula. The taught phosphor would inherently have the claimed property of claim 21. When the prior art and appellant both describe processes which are indistinguishable, then the products may also be assumed to be inherently indistinguishable. *In re Myers* 159 USPQ 339 (CCPA 1968); *In re Prindle* 132 USPQ 282 (CCPA 1962). The claimed process teaches to stimulate the phosphor screen having the stored image to release the stored radiation and detecting or collecting the stimulated radiation. The patent teaches the stimulating radiation is in the range of 500-1100 nm and that the image is produced using X-rays. Thus the claimed process suggests the claimed process of claim 16.

There is evidence in this file showing that the invention was not owned by, or subject to an obligation of assignment to, the same entity as the above patents and published application at the time this invention was made. Accordingly, these references are not disqualified as prior art through 35 U.S.C. 102(f) or (g) in any rejection under 35 U.S.C. 103(a) in this application.

The argued presumption of inventorship also applies to the cited references since they all claim the process and compositions claimed in this application. Thus the question as to who is the actual inventor the claimed processes is raised by these references. Applicants' arguments did not clarify who is the actual inventor of the claimed process and compositions, the inventors listing this application; Luc Struye and Paul Leblans, as indicated in the claims in the patents or Erich Hell, Manfred Fuchs, Detlef Mattern, Bernhard Schmitt and Paul Leblans as indicated by the claims in the published application. The fact the patents are directed to method or using the phosphors of this application and devices containing these phosphors does not overcome the

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rejection since the patents and published application all claim the process of this application. It is noted that the patents also claim priority to the same provisional applications as this application. Applicants also argue that the published application is non-enabling. This argument has little weight since the scope of detail in the published application is the same as in the present application. Thus if the published application is non-enable, applicants' application must also be non-enabled. If applicants repeat this argument, then the Examiner will have to make the rejection that applicants' disclosure does not meet the enablement requirement for the same reason.

Claims 1-15 and 20-35 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 8-10 of U.S. Patent No. 6,479,835. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed detector suggests the processes, phosphors and screens of this application, for the reasons given above.

Claims 1-15 and 20-35 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5-7 and 10-12 of U.S. Patent No. 6,528,812. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed detector suggests the processes, phosphors and screens of this application, for the reasons given above.

Claims 1-15 and 20-35 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-5, 9 and 10 of U.S. Patent No. 6,512,240. Although the conflicting claims are not identical, they are not patentably distinct

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from each other because the claimed detector and process suggest the processes, phosphors and screens of this application, for the reasons given above.

Claims 1-15 and 20-35 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3 and 4 of U.S. Patent No. 6,501,088.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed process suggests the processes, phosphors and screens of this application, for the reasons given above.

Claims 1-16 and 20-35 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,495,850. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed process suggests the processes, phosphors and screens of this application, for the reasons given above.

Applicants argue that it is improper to make an obviousness-type double patenting rejection when the inventive entity of the reference is not identical to that of the application. The MPEP clearly teaches in 804(I)(A) that obviousness-type double patenting rejections can be made in applications where the reference has at least one common inventor with the applicant, even if the inventive entity is not identical. Applicants have not provided any statutory basis or any basis in the MPEP for their belief that obviousness-type double patenting rejection cannot be made when the inventive entity of the reference is not identical to that of the application. Thus this argument is not convincing. Applicants also argue obviousness-type double patenting rejection should be based on the two-way obviousness test, not the one way obviousness test utilized in the above rejections. This arguments with respect to the patents is given little weight

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since the patents and this applicant all have same effective filing dates since the patents claim priority to the same provisional applications as this application and the prosecution delays were caused to the fact the patents were filed in the US under 35 111(a) and the present application was filed as a PCT and then applicants waited 1 year and a half to file a continuation of the PCT application in the United States. Thus the delay was not an administrative delay caused by the PTO. The rejections are maintained.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (703) 308-3817. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at (703) 308-3823.

The fax number for Amendments filed under 37 CFR 1.116 or After Final communications is (703) 872-9311. The fax number for all other official communications is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661 or (703) 308-0662.

cmk
July 1, 2003


C. Melissa Koslow
Primary Examiner
Tech. Center 1700